

**TECHNICAL ADVISORY COUNCIL**  
**A Subcommittee of the Commission on Technology**  
**Minutes**  
**December 12, 2003**

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**Members Present:**

Mohyeddin Abdulaziz  
John Barrett  
Ron Beguin  
Janet Cornell  
David Davis  
Karl Heckart  
John King  
Cary Meister  
Eloise Price  
Will Tagart

**Members Not Present:**

Daniel Edwards  
Joan Harphant  
Carol Merfeld  
Greg Obuch  
Kyle Rimel  
Alan Turner

**Others Present:**

Dave Adams  
Eric Ciminski  
William Earl  
Gary Graham  
Maureen Haggerty  
Jared Harvey  
Paul Hrisho  
Randy Kennedy  
Robert Roll

**INTRODUCTIONS**

The meeting of the Technical Advisory Council on December 12, 2003 was called to order at 9:30 a.m. by Karl Heckart, Chair.

**ENTERPRISE ARCHITECTURE STANDARDS**

The group discussed the Enterprise Architecture draft document noting that it would apply to new application development. They agreed there must be an exception process, especially for 3<sup>rd</sup> party packages are acquired. Further, it was stated that exceptions were not to be considered a new de facto standard. The intention of the standard is that it applies to all development and acquisitions across the judiciary. It will be in RFP's and, although there will be an exception process for acquiring outside of the standard, products and services will be chosen with these architecture standards as part of the selection criteria.

Where possible, a product standard will be identified. Factors would include that the product was selected according the judicial procurement rules as well as demonstrating that a product rather than a standard will facilitate greater sharing and leveraging and the best use of limited judicial resources.

It was agreed that there should be a periodic review of the standard. However, the standard could be addressed at any time a request for reconsideration of the standard might be made to the COT or TAC.

Then members began addressing specific items on the draft document.

First, the “User Interface Delivery Method” was clarified to apply to public access and was identified as Web-based only. Other interfaces for internal systems would be a topic for future consideration but generally, the choice (e.g. web-based, client, monolithic) would be based on a performance and benefits analysis.

The “Report Writer” was clarified to apply to ad hoc reporting. A new line was added for business application reports. Crystal Enterprise remains the current selected tool for that function; there was, however, considerable discussion of Brio since Pima Superior has indicated a preference for acquiring that tool in the near future. Brio was put on the watch list but interested parties will reexamine the general capabilities of both suites of products. Since Pima Probation has committed to developing many APETS reports and Crystal had been the likely development tool, they could not use Brio without forcing the entire state to use Brio to leverage that development work. Pima indicated they would fulfill their commitment in Crystal but wanted Brio. It was agreed that if they had needs that could not be met with the Crystal suite of products, they could come to TAC for an exception. They were invited to a Crystal demonstration at the AOC on Friday December 19 at 4:00 p.m.

The group discussed some specialized statistical reporting tools currently in use like SPSS and SAS. It was agreed that there would be another line for this type of reporting and standards for it would be considered at a later date.

Some general discussion of the standards concept ensued. Whether these standards would apply to all court-related automation development or just to shared modules or core-related modules. Funding was an issue as this standard, some thought, could be viewed as an unfunded mandate. Karl stated that he felt it should relate to all development and different tools should not be adopted on an application by application basis unless there was significant justification. An exception process could handle those. Existing architectures would be grandfathered in for continued maintenance of existing systems. The key concern in the discussion was leveraging the work of the larger courts that had IT staffs so that the smaller courts could benefit from their work by sharing.

“Development Environment” was discussed. A major factor in adopting .NET at this time is Maricopa Superior Court’s desire to begin JOLTS development in Visual Basic.

They agreed the long-term standard should be .NET and would, when the module was complete, begin a project to convert iCIS and the new JOLTS system to .NET. Current lack of knowledge and training in .NET among court IT staffs is a factor in this approach. Jim Ham, the AOC JOLTS manager, noted that industry conventional wisdom is that rewriting from traditional VB to .NET takes about 40% of the time it took to develop the original VB program. He questioned committing to that additional effort. A compromise decision of this group was to recommend mandatory use of .NET one year after COT adoption of the architecture.

All members requested statewide training for .NET statewide. Karl will be asking COT for training funding for tools included in the enterprise architecture.

The Data Base Management System (DBMS) standard was discussed. It was agreed to have both DB2 and SQL Server as the standard, pending further research.

#### **DIGITAL AUDIO STANDARD IMPACT**

This topic was discussed in the context of the Enterprise Architecture. For the “Audio File Format,” it was decided to table this issue pending the outcome of the court’s “Keeping the Record” subcommittee. Depending on the business requirements they recommend, especially those related to retention schedules, this could become a non-issue.

#### **JUSTICE INTEGRATION XML STANDARDS**

This topic was discussed in the context of the Enterprise Architecture discussion. Members reviewed the newly proposed Arizona Criminal Justice Commission’s Criminal Justice Data Dictionary with XML tags derived from the JXDD. They agreed to recommend the JXDD and Arizona Criminal Justice Commission Data Dictionary as the standard.

#### **ELECTRONIC/DIGITAL SIGNATURES**

The “Electronic Signatures” standard will be researched by a TAC subcommittee. Mo Abdulaziz, Randy Kennedy and Will Tagart volunteered. Since Pinal Superior and City of Tucson have both noted a desire to use electronic signatures, someone from those courts will be recruited. Maureen Haggerty will facilitate.

The revised Enterprise Architecture document, incorporating the above recommendations, is attached. It will be presented to the Commission on Technology at its January 9 meeting where two topics, a new case management system and new JOLTS development, may be impacted by the standards proposed here.

Following a “Call to the Public,” the meeting adjourned at 3:30

# ARIZONA JUDICIAL BRANCH ENTERPRISE ARCHITECTURE STANDARDS

## Rationale:

Adopting an IT architecture, although intuitively a positive organizational direction, is often difficult. Standards are many times perceived as giving up freedom. However, with today's fast-paced technology demands, architecture is a strategic necessity. A mature IT enterprise must have the discipline to adopt and follow a consistent set of strategies, reference models and exchange capabilities.

- Per Gartner, the strategic goal of enterprise architecture is to position the [entity] to leverage technology in support of the business strategy and make technology the proactive enabler of an agile, responsive enterprise that can react in real time to changes in the marketplace, and take advantage of new business opportunities.
- Enterprise architecture will provide standardization and elimination of redundancy and complexity across the Arizona Judicial Branch.
- The cross-jurisdictional nature of criminal justice activities supports adopting common architectures to facilitate integration.
- The Judicial Branch should avoid being what Gartner Group describes as a "typical unarchitected e-government" where "multiple sets of customer channels, interfaces and systems are independently developed ... and require duplicative infrastructure and forced disparate access experiences for constituents."
- There is a lower cost to buy and support a limited set of products and standards; the judiciary can leverage both volume discount buying and maintain a less complex environment.

Below is the recommended Enterprise Architecture Standard for the Arizona Judicial Branch. The standards, protocols and products listed are prescribed for core, leveraged activities and applications among the courts statewide. Where there are unique local undertakings that cannot be leveraged, a court is free to go beyond the standards set here. If sharable modules related to core applications are developed, then the standards should be followed. Non-standard products and applications are a challenge to support and can be a security concern. The "Distributed Component (Bolt-on) Module" (attached) documents the approaches to development of local, leveraged and standardized modules. To be sharable, supported in the statewide framework or part of core standardized applications, modules will be developed to the Enterprise Architecture Standard of the Arizona Judicial Branch.

A bi-annual review of these standards by the Technical Advisory Council is recommended. Local or state automation projects requiring exceptions can initiate a review of selected items.

**ARIZONA JUDICIAL BRANCH  
ENTERPRISE ARCHITECTURE STANDARDS**

<b>Architecture Layers</b>	<b>Baseline</b> (currently in use)	<b>Retirement</b> (targeted for de-investment)	<b>Containment</b> (limited to maintenance & current commitments)	<b>Mainstream FUTURE</b> (primary option for new systems or legacy migration)	<b>Watchlist: Emerging Technologies</b> (to be evaluated for future inclusion)	<b>Comments</b>
<b>Applications &amp; Tools</b>						
User Interface Delivery Method for Public Access	Browser-based			Browser-based		For both Microsoft Internet Explorer and Netscape
User Interface Delivery Method for Business Applications						To be determined.
Electronic Document Management	Hyland OnBase			Hyland OnBase		
Document Imaging	Kofax; other systems pre-2003 RFP			Kofax		
Report Writer for Ad Hoc Reporting	Crystal Enterprise			Crystal Enterprise	Brio	

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Report Writer for Business Application Reports	Varies: Cyrstal, native application report writers, "hard coded" reports.					To be determined.
Statistical Reporting	SPSS SAS					To be determined.
Development Environment	Visual Interdev, Visual Studio, PowerBuilder, Panther, Traditional 3GL	Panther, COBOL	Visual Interdev, Visual Studio, PowerBuilder	.NET, Selected Traditional 3GL (on a business case need basis)		

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Source Control	PCVS, Visual Source Safe, CCC Harvest (Phx.), Aldon (JOLTS), SCCS (DW)					Need a process to meet requirements, not a specified tool. FY2004 TAC assignment to develop a change management process.
Word Processing	Word Perfect, Word		Word Perfect	Word		
Email	SMTP standards as defined by RFC 821 and the MIME standards, as defined by RFC 1521 and RFC 1522,			SMTP standards as defined by RFC 821 and the MIME standards, as defined by RFC 1521 and RFC 1522,		

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<b>Data Architecture</b>						
DBMS	Informix, DB2, SQL Server	Informix		SQL Server, DB2		
Data Warehouse DBMS	Informix XPS			Informix XPS		
DBMS Modeling Tools	PowerDesigner Erwin, Visio					Tools must be capable of creating alter scripts to update database schemas.
Data Exchange Model	JXDD 3.0.0.1			JXDD 3.0.0.1		In conjunction with the Arizona Criminal Justice Commission's Arizona Data Dictionary. XML standard to be found at <a href="http://it.ojp.gov/jxdd/">http://it.ojp.gov/jxdd/</a>



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Document format	Tagged Image File Format (TIF), Portable Document Format (PDF)			Tagged Image File Format (TIF), Portable Document Format (PDF)	XML	
Audio File Format	Proprietary formats					Need to adopt this format for FY 2004; Gartner recommends uncompressed .WAV
Video File Format	Proprietary formats					
Data Encryption	Triple Data Encryption Standard (Triple DES)			Triple Data Encryption Standard (Triple DES)		For data encryption over public networks

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Stored Data Encryption						
<b>Networks and Platforms</b>						
Network Protocol	Transmission Control Protocol/ /Internet Protocol (TCP/IP) as defined in RFC 793 and RFC 791.			Transmission Control Protocol/ /Internet Protocol (TCP/IP) as defined in RFC 793 and RFC 791.		
Client Operating System	Varies; primarily Windows 2000			Local option where there is local support else Windows 2000+		
Server Operating Systems	Microsoft Windows, UNIX			Microsoft Windows, UNIX	Linux	

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Database Server Operating System	UNIX, Windows 2000, Windows Datacenter					
<b>Shared Services</b>						
Component Service Layer	DCOM, ASP, SOAP			Microsoft's Enterprise Services	Web Services	
Directory Services						
Electronic Signatures	None					To be addressed in 2004
Identity Authentication						
<b>Message Transport Middleware</b>						
Message Transport	MQ			MQ		

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Data Transformation	MQSI, Data Junction; Cloverleaf		Data Junction	MQSI		At the state level; not required at the local level.
Data Routing/Publish and Subscribe	MQSI; Cloverleaf			MQSI		At the state level; not required at the local level.
File Transfer	FTP		FTP	MQ		

The Technical Advisory Council will develop an Exception Process and recommend it for adoption by the Judicial Branch along with the Enterprise Architecture.

### Exception Process Principles:

1. A business case can justify alternative choices. This includes introducing new technologies that are not listed here.
2. Local and statewide impacts must be considered in the impact analysis.
3. These standards apply to core applications.
4. Enterprise leveraging is the key business driver for adoption of this architecture.
5. National and industry standards will be considered in any impact analysis.

A section for the Arizona Code of Judicial Administration will be submitted for adoption. It will reference this document, as maintained and published on the Commission on Technology Web site, as the Enterprise Architecture standard. It will contain a description of the Enterprise Architecture document, an explanation of the benefits and the exception process.

## MODEL FOR “BOLT-ON” DISTRIBUTED MODULE DEVELOPMENT

FACTORS		MODULE CATEGORY		
		LOCAL INDEPENDENT OR COORDINATED	LEVERAGED	STANDARDIZED CORE
	<b>Definition:</b>	Developed independently and state has no need to know about and no responsibility for. It also can include modules developed independently but with knowledge of and in coordination with the state.	Developed to share or acquired to become a function that multiple courts in a community of interest can use.	These modules are part of the CMS and fully supported and enhanced at the state level. If a court wants the function, they will use the module.
	<b>Examples</b> from existing known modules:	<ul style="list-style-type: none"> <li>• Noticing program in Tucson Muni</li> </ul>	<ul style="list-style-type: none"> <li>• Rural MEEDS</li> <li>• FTA/FTP in Tucson Muni</li> </ul>	<ul style="list-style-type: none"> <li>• EDMS vendor products – OnBase &amp; Kofax</li> <li>• EDMS in-house built interfaces.</li> <li>• Jury+</li> <li>• eCitation import &amp; interface (future)</li> <li>• File Tracking</li> <li>• PAM</li> </ul>
1	AJIN security compliance with levels of compliance stratified where possible. (See AJIN Security Manual; required for all)	Yes	Yes	Yes

## MODEL FOR “BOLT-ON” DISTRIBUTED MODULE DEVELOPMENT

FACTORS		MODULE CATEGORY		
		LOCAL INDEPENDENT OR COORDINATED	LEVERAGED	STANDARDIZED CORE
2	Architecture (hardware and software, development language and tools, operational environment; any programming or technical standards adopted by development group)	Local tools and standards.	Constructed or tightly coupled with adopted tools and standards if developed in-house; otherwise compatible vendor tools.	Constructed or tightly coupled with adopted tools and standards if developed in-house; otherwise compatible vendor tools.
3	Core program screen or code changes	No, but negotiable if there is leverage potential.	Maybe make and support minor changes to core image/code to provide for module.	Yes – Will make and support changes to provide for module.
4	Change management coordination (notices of changes; coordinating new releases of standard software image; coordinated testing and implementation planning)	Notice provided as part of release announcements.	Yes, with good faith effort to provide reasonable notice and implementation planning and coordination.	Yes and core participates in new release testing.
5	Database changes to Core DB (new tables or columns)	No, but negotiable if there is leverage potential.	Maybe – may change core DB to provide for a module	Yes – Core will make and support changes to provide for module.

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FACTORS		MODULE CATEGORY		
		LOCAL INDEPENDENT OR COORDINATED	LEVERAGED	STANDARDIZED CORE
6	Help Desk (the 800 support desk)	Local	Level 1 calls (first point of contact) centralized to AOC (e.g. will take report and forward problem to designated support point)	Full core support for the module and interface points. Level 1 calls are centralized and core has involvement in interface issues.
7	Interface/version protection (the interface between module and standard software will not be broken)	No but will provide notice of changes, and of impacts if known for modules known to core.	Coordinated with custodian or vendor contact.	Yes with agreement and planning on version change approaches and joint impact analysis.
8	Maintenance of the module	Local	Appointed custodian among participants or a vendor.	Core or appointed custodian (or vendor).
9	Module (source code) owner – as “official version” source and version control	Local	Selected custodian among participants	Core
10	Module (source code) repository if not vendor-provided and/or in escrow.	Local	Selected custodian and AOC	Core
11	Operational support (use of core technical staff for h/w or s/w support during operation of module)	No	Limited (e.g. troubleshooting, interface support)	Yes, if a documented support model is negotiated.



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FACTORS		MODULE CATEGORY		
		LOCAL INDEPENDENT OR COORDINATED	LEVERAGED	STANDARDIZED CORE
12	Part of standard desktop image/standard software installation	No	No	Yes
13	Sharable	No; will not be distributed to others	Yes, with participant coordination; must be approved by AOC/COT	Yes; If vendor provided, must provide a support model.
14	Support Model Required (i.e. documentation on who supports and problem resolution steps)	No	Yes - Model is that a local contact or a vendor will support. Contact person and module information required for Level 1 Help Desk support calls.	Yes - Model and specifics of support documented. Core support provided via Help Desk and Service Level Agreements.
15	System Documentation	Local option	Core as repository; custodian maintains	Core staff maintains
16	Technical support (documentation and resources during development; h/w or s/w help; e.g. configuring servers, installing software)	Limited to coordination; limited development support	Yes for development	Yes

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FACTORS		MODULE CATEGORY		
		LOCAL INDEPENDENT OR COORDINATED	LEVERAGED	STANDARDIZED CORE
17	Testing (of module, of interface and network/system impacts)	Local	Participant tested	Core with local participation
18	Training (includes user and technical support training and documentation)	Local	Participant training	Core staff documents and performs training primarily for field trainers. Centralized repository for documentation.
19	Updates to core database (add, replace, delete of data in existing data structures)	No unless coordinated with core and approval received.	With core approval	Yes
20	User and training documentation	Local option	AOC as repository; Custodian maintains	Maintained by core.